

#758

ISEE 1 & 2

MULTI-COORD EPHEMERIS ON CD-ROM

77-102A-00N

77-102B-00L

ISEE 1 & 2

MULTI-COORD EPHEMERIS ON CD-ROM

77-102A-00N

77-102B-00L

This data set consists of 6 CD-ROM's. The documentation provided here is included on the disks. The KD numbers, labels name and time spans are as follows:

ISEE 1

77-102A-00N

KD #	Label Name	Time Span
KD001450	IC10_0002A	10/22/77 - 02/22/81
KD001451	IC10_0003A	02/15/77 - 07/01/84
KD001452	IC10_0004A	06/24/77 - 09/26/87

ISEE 2

77-102B-00L

KD #	Label Name	Time Span
KD001453	IC20_0002A	10/22/77 - 02/22/81
KD001454	IC20_0003A	02/15/77 - 07/01/84
KD001455	IC20_0004A	06/24/77 - 09/26/87



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November 18, 1993

Enclosed in this package are 6 ISO-9660 compliant Write-Once CD-ROM's containing International Sun-Earth Explorer #1 (ISEE-1) Multi-Coordinate Ephemeris (MCE) data [3 CD-ROM's] and International Sun-Earth Explorer #2 (ISEE-2) Multi-coordinate Ephemeris (MCE) data [3 CD-ROM's] at 60 second resolution as received from Goddard Space Flight Center.

The CD-ROM images were generated on a Sun Workstation using software from Young Minds. The images were written to Recordable CD's using CDwrite software and a Phillips CD recorder on an IBM compatible PC. The CD-ROM's can be mounted on any system that can read ISO-9660 compatible CD-ROM's. Each CD-ROM contains a volume description file in Standard Formatted Data Unit (SFUD) format with the file name "/VOLDESC.SFD". Also, each CD-ROM includes the file "/MCE.SFD", which contains the structure of the data files in SFUD format and the file "/ERRATA.TXT", which is a cumulative description of notes and changes that should be applied to previous volumes. The "/ERRATA.TXT" file in the last ISEE-2 MCE CD-ROM (USA NASA NSSD IC20 0004A) includes a complete errata file for all the MCE CD-ROM's. Finally, software has been archived on each CD-ROM that demonstrates how to read and process the MCE data on a Sun UNIX system. For a description of the software see the file "/SOURCE/AAREADME.TXT". Printed copies of all the VOLDESC.SFD files, along with the last ERRATA.TXT and one copy of the MCE.SFD and AAREADME.TXT files have been included for reference.

Please note that each CD-ROM has an NSSDC volume identification number. Technical support for the preparation of the SFUD documentation was provided by Doug Gross of the NSSDC Standards Office, (310) 513-1693. Included on the next page is a list of volume identification numbers and the data coverage on each CD-ROM.

If you have any questions please contact:

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ISEE-1 MCE LOG VOL IDENT	DATA GROUPS	TIME COVERAGE
USA_NASA_NSSD_IC10_0002A	0001 - 0339	10/22/77 14:49 - 02/22/81 05:59
USA_NASA_NSSD_IC10_0003A	0339 - 0689	02/15/81 00:00 - 07/01/84 05:59
USA_NASA_NSSD_IC10_0004A	0689 - 1028	06/24/84 00:00 - 09/26/87 05:59

ISEE-2 MCE LOG VOL IDENT	DATA GROUPS	TIME COVERAGE
USA_NASA_NSSD_IC20_0002A	0001 - 0339	10/22/77 14:49 - 02/22/81 05:59
USA_NASA_NSSD_IC20_0003A	0339 - 0689	02/15/81 00:00 - 07/01/84 05:59
USA_NASA_NSSD_IC20_0004A	0689 - 1028	06/24/84 00:00 - 09/26/87 05:59



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* aareadme.txt - This file contains a list of the files in the /SOURCE/
*                directory of the write-once CD-ROM's containing the
*                Multi-Coordinate Ephemeris (MCE) data set of the
*                International Sun-Earth Explorers (ISEE) 1 and 2
*                spacecraft of the United States National Aeronautics and
*                Space Administration (NASA).
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AAREADME.TXT

This file contains a map showing how the files in the /SOURCE/ directory of the ISEE MCE CD-ROM's are used to read and interpret the ISEE MCE dataset. Included herein is a brief description of the purpose of each file. The files themselves contain more complete documentation.

CD-ROM documentation files:

- voldesc.sfd - SFDU volume description file for this CD-ROM. This file contains spacecraft and instrument descriptions, an overview of the MCE dataset, a list of the data files included on the disk with their start and stop times, and a list of the support files that have been included on the disk. These support files are described more fully in this AAREADME.TXT file.
- mce.sfd - SFDU detailed dataset description. This file provides a detailed layout of the MCE dataset including a description of each item in the MCE dataset and its word location in the header or data records.

DEC VMS files:

- mce - Program to read ISEE MCE data files and write their contents to SYS\$OUTPUT. It is constructed from these files:
 - MCE.COM - Compile and link command file MCE.FOR
 - MCE.FOR - FORTRAN program to write out ISEE MCE data files
 - CTIME.FOR - FORTRAN time subroutines used by MCE.FOR

IGPP.FOR - FORTRAN general subroutines used by MCE.FOR

Sun UNIX files:

- Makefile - Input file for the UNIX "make" command. It builds the library libIGPP.a and compiles and links all Sun MCE programs.
- libIGPP.a - Subroutine library created by Makefile and used by all Sun MCE programs. It is constructed from these files:
 - convert.c - C language data conversion functions
 - ctime.c - C language time functions
 - flat.F - FORTRAN UCLA-IGPP flat file subroutines
 - flatcom.f - FORTRAN include file for flat.F
 - igppfort.f - FORTRAN general subroutines
 - igpplib.c - C language general functions
- mce - Program to read ISEE MCE data files and write their contents to standard output. It is constructed from these files:
 - mce.f - FORTRAN program to write out ISEE MCE data files
 - libIGPP.a - UCLA-IGPP subroutine library described above
- atorb - Program to read and interpret ISEE MCE data and write out a UCLA-IGPP flat file (Please refer to comments in the source code for further details concerning flat files). It is constructed from the first three files listed below and uses the last four files:
 - atorb.f - FORTRAN program to read and interpret MCE data
 - aolib.f - FORTRAN subroutines included in atorb.f
 - libIGPP.a - UCLA-IGPP subroutine library described above
 - aperigee.dat - ISEE 1 perigee times & altitude, read by atorb
 - bperigee.dat - ISEE 2 perigee times & altitude, read by atorb
 - iseelmce.dat - ISEE 1 MCE start/stop times, read by atorb
 - isee2mce.dat - ISEE 2 MCE start/stop times, read by atorb
- ao2ascii - Program to read a UCLA-IGPP flat file containing ISEE MCE data and write the information to standard output. It is constructed from these files:
 - ao2ascii.f - FORTRAN program to write out ISEE MCE Flat files
 - libIGPP.a - UCLA-IGPP subroutine library described above

CD-ROM usage notes:

- Sun UNIX - To use the Sun UNIX programs, "cp" the source code to magnetic disk, the data files may be copied to magnetic disk or read directly from the CD-ROM. Once the source code has been moved, rename the FORTRAN file "flat.f" to "flat.F" for use by cpp (the makefile will attempt to do this automatically). Type "make all" to compile and link all the ISEE MCE programs.
 - DEC VMS - To use the Sun UNIX programs, FTP the source code in ASCII mode and the ISEE MCE data files in BINARY mode from VMS to UNIX. Once the source code has been moved, rename the FORTRAN file "flat.f" to "flat.F" for use by cpp (the makefile will attempt to do this automatically). Type "make all" to compile and link all the ISEE MCE programs. To use the DEC VMS program MCE.FOR, "COPY" the VMS source code to magnetic disk, the data files may be copied to magnetic disk or read directly from CD-ROM. Type "@MCE" to compile and link the program.
 - GENERAL - To determine which ISEE MCE data groups are needed to process certain ISEE orbits with ATORB, cross reference the MCE data file start and stop times in the "iseeXmce.dat" files with the ISEE orbital start times in the "Xperigee.dat" files.
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